



Technical Information

MICROFINE[®] AO-3

Antimony Trioxide

Microfine[®] AO3 is a sub-micron particle size antimony trioxide with an average particle size of 0.3 microns. The product is predominantly senarmontite (cubic crystal form), with a high tinting strength and a bright white powder color.

CAS Reg. Number [1309-64-4]

Sb₂O₃

Typical Properties

Appearance	Very Fine White Powder
Specific Gravity	5.5
Refractive Index	2.1
Loose Bulk Density, lb/ft ³	24 - 26
Packed Bulk Density, lb/ft ³	36 - 38
Avg. Particle Size, Sedigraph	0.2 - 0.4 μm
Fineness thru 325 mesh sieve	99.995%
Surface Area (BET) m ² /gm	10 - 11
Tinting Strength, %	120 - 130
Moisture, 2 hrs @ 105°C	0.1%
Water Soluble	0.25%

Typical Composition

Antimony Trioxide	99.3%
Arsenic	0.3%
Lead	0.2%
Iron	0.01%
Nickle	0.005%
Copper	0.005%
Acidity (H ₂ SO ₄)	0.15%

Microfine AO3 finds application as a flame retardant, when used in combination with a source of halogen. In rigid and plasticized PVC compounds, the addition of controlled amounts of **Microfine AO3** will confer excellent flame retardant properties. **Microfine AO3** is especially recommended in coating applications where it's very fine particle size can give benefits of improved suspension stability, smoother surface finish and improved physical properties along with it's high white pigmenting power. **Microfine AO3** also finds application in thermoplastic compounds where tensile and impact properties are critical or in very thin wall applications to improve surface finish and electrical properties.

The use of proper protective equipment is recommended. Excess exposure to the product should be avoided. Wash thoroughly after handling. Store the product in a cool, dry, well-ventilated area away from incompatible materials. Unless stated, proper storage will permit usage of the product for 6 to 12 months from the date of receipt. For additional handling and toxicological information, consult the GLCC Material Safety Data Sheet.

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